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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,062	12/14/2001	Dean Stoneback	MOT-D2555	6228

24375 7590 05/16/2005

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EXAMINER	
SALCE, JASON P	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,062	STONEBACK ET AL.	
	Examiner	Art Unit	
	Jason P. Salce	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/28/2005 have been fully considered but they are not persuasive.

Regarding independent claim 1, Applicant argues that Williams nor Cooper disclose a system for monitoring, isolating, and reporting ingress noise traveling upstream in an HFC network, which includes a BTP remotely located at or downstream from the node at or downstream from an RF amplifier in the HFC network.

The examiner disagrees and notes that Williams clearly teaches monitoring (Column 10, Line 40), isolating (Column 10, Line 66), and even reporting (Column 10, Lines 43-45) ingress noise traveling upstream (see Column 4, Lines 66-67 and Column 5, Lines 1-10) in an HFC network (Column 7, Lines 46-49). The Applicant notes that Williams is specifically used for monitoring the network for attackers/pirates. This is only one of the many uses of Williams. Williams clearly states that the system is used for not only providing pirate-free communications, but also used for undesirable energy suppression (a.k.a. noise, further described at Column 4, Lines 9-22).

Williams also teaches a BTP (element 140 in Figure 2) remotely located at or downstream from the node (element 170 in Figure 1) at or downstream from an RF amplifier (element 132 in Figure 1) in the HFC network (Figure 1). The structure and location of the BTP as claimed is clearly taught by Williams. If the Applicant wishes to distinguish any differences between his BTP and element 140 in Figure 2 of Williams

(provided there is support by Applicant's specification), the examiner invites Applicant to amend the claims to make such a distinction.

Applicant also argues that Cooper does not teach the limitations discussed above. Cooper is simply used to teach that the return transmitter of Williams is capable of taking the form of a modem.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Referring to independent claim 5, see the arguments presented by the examiner in regards to claim 1. Further, Applicant argues that Williams clearly does not disclose a coupler of a tap and any relation of a BTP thereto. The claim states, "a tap having an RF line to transmit RF signals, an upstream-facing directional coupler located on the RF line, and a downstream-facing directional coupler located on the RF line", which is why the examiner equated elements 363 and 202 in Figure 3 to the couplers. Nowhere does claim 5 state that the tap must contain these elements. Consequently, the tap shown is connected to an upstream and downstream RF line, therefore, the tap inherently contains the couplings in claim 5. Without such a connector, the tap could not even be connected to the system.

For the remaining claims, see the arguments discussed above and note that the examiner agrees that Wagner and Bushue are used to teach an amplifier with a diplexer and a tap with a diplexer, respectively.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section.102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-21, 23-24, 26-30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (U.S. Patent No. 5,745,836) in view of Cooper et al. (U.S. Patent No. 6,772,437).

Referring to claim 1, Williams discloses monitoring, isolating and reporting ingress noise traveling upstream (see Column 10, Lines 37-45) in an HFC network (see Column 7, Lines 46-49) having a hub (Column 7, Lines 51-52), a domain manager (element 230 in Figure 2) for receiving a status signal of the HFC network (see Column 10, Lines 37-45), a fiber optic line (Column 8, Lines 23-25), and a node located along

the fiber optic line (element 170 in Figure 1).

Williams also discloses a BTP remotely located at or downstream from the node (element 140 in Figure 1) at or downstream from an RF amplifier in the HFC network (elements 131-132 in Figure 1 and Column 9, Lines 2-4), the BTP including an ingress monitoring interface connected to the HFC network to detect and isolate ingress in the HFC network downstream from the interface (element 240 in Figure 3 and Column 10, Lines 61-67 and Column 11, Lines 1-5) and a return transmitter in communication with the domain manager to transmit and report detected ingress information (element 250 in Figure 2 and Column 11, Lines 8-15).

Williams fails to specially disclose that the return transmitter 250 in Figure 1, is a modem. Cooper teaches that modems are well known to report and monitor ingress noise in a cable network (see Column 6, Lines 16-26 and Column 7, Lines 66-67 and Column 8, Lines 1-26).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the return transmitter, as taught by Williams, using the modem, taught by Cooper, for the purpose of detecting unacceptable noise level events (see Column 8, Line 8 of Cooper).

Referring to claim 2, Williams discloses a tap connected to the HFC network and located downstream from the node, and the ingress-monitoring and isolating interface and reporting modem are connected to the HFC network at the tap (see element 170 connected to element 140 in Figure 2).

Referring to claim 3, Williams discloses that the tap includes an upstream-facing

directional coupler and a downstream facing directional coupler, the ingress-monitoring and isolating interface being connected to the downstream-facing directional coupler and the reporting modem being connected to the upstream-facing directional coupler (Column 7, Lines 62-67 and Figures 1 and 2).

Referring to claim 4, Williams discloses that the upstream-facing directional coupler is located downstream from the downstream-facing directional coupler (see Figures 1 and 2).

Referring to claim 5, Williams discloses a tap having an RF line to transmit RF signals (see element 170 in Figure 2), and upstream-facing directional coupler located on the RF line (element 363 in Figure 3), and a downstream-facing directional coupler located on the RF line (element 202 in Figure 3). For the BTP element, see rejection of claim 1.

Referring to claim 6, Williams discloses that the tap includes an AC line for transmitting AC power, and the BTP receives AC power from the AC line (Column 7, Lines 66-67 and Column 8, Line 1).

Referring to claim 7, Williams discloses a telephone lead from a central office switch (element 631 in Figure 6), therefore teaching twisted pair.

Referring to claim 8, see rejection of claim 4.

Referring to claim 9, Williams discloses in an alternate embodiment that a remote point (building) can have a dedicated BTP (Column 11, Lines 42-59).

Referring to claim 10, see Figure 1 for an amplifier (element 132 in Figure 1) located upstream from the tap (element 170 in Figure 1).

Referring to claim 11, see Figures 1-4.

Referring to claim 12, see rejection of claims 1 and 5.

Referring to claim 13, it is inherent that AC power must be converted to DC power in order for specific equipment to function properly.

Referring to claim 14, Williams discloses an amplifier at Column 9, Lines 2-4.

Referring to claim 15, see rejection of claims 1-3, and 5.

Referring to claim 16, see rejection of claim 4.

Referring to claim 17, see rejection of claim 2.

Referring to claim 18, see rejection of claims 14 and 15.

Referring to claim 19, see rejection of claim 16.

Referring to claim 20, see rejection of claim 17.

Referring to claim 21, Williams discloses in Figure 2, two drop lines coming from upstream-facing coupler 237, one feeds signals to the prybar receiver, which controls the ingress noise (see arguments above), and the other line is connected to the modem through element 228 in Figure 2.

Referring to claim 23, see rejection of claim 21.

Referring to claim 24, Williams discloses a modem that is powered by a line connected to the power line (see Column 9, Lines 42-45).

Referring to claims 26-27, see rejection of claim 21.

Referring to claim 28, Williams discloses a fiber optic receiver (element 119 in Figure 1) connected to the fiber optic line (see element 115 in Figure 1), and connected to the plurality of branches by a downstream line (see element 105 in Figure 1), which

converts optical signals traveling downstream from the fiber optic line into electrical signals (see Column 8, Lines 11-15 for an electrical signal leaving the Fiber Receiver 118 in Figure 1, since a fiber optic signal is entering the receiver and an electrical is leaving, the conversion must take place).

Williams also discloses a fiber optic transmitter (element 119 in Figure 1) connected to the fiber optic line (element 114 in Figure 1), and connected to the plurality of branches by an upstream line (see element 105 in Figure 1), which converts electrical signals traveling upstream from the branches into optical signals (see Column 8, Lines 15-17 for a fiber optic signal leaving the transmitter to go back to the headend, therefore, the conversion from element 105 in Figure 1, would have to be converted back to an optical signal), wherein the plurality of downstream-facing directional couplers are located on the upstream line (see Column 9, Lines 1-4).

Referring to claim 29, Williams discloses a plurality of return gates (boxes labeled "G" in Figure 1), which all contain two diplexers, as shown in Figure 2. Upstream and downstream signals are filtered through these return gates so that downstream signals passing through the downstream line through each of the branches, exit the node without entering the upstream line (this is how a low or high pass filter works. by filtering the low frequency signals (the upstream signals) and the high frequency signals (the downstream signals)).

Referring to claim 30, Williams teaches an amplifier on the downstream line on each of the branches (see element 131 in Figure 1).

Referring to claim 32, see rejection of claim 29.

3. Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (U.S. Patent No. 5,745,836) in view of Cooper et al. (U.S. Patent No. 6,772,437) in further view of Bushue et al. (U.S. Patent No. 5,845,190).

Referring to claim 22, Williams and Cooper disclose all of the limitations in claim 4, as well as Williams teaching a network tap (see Figure 3), equipped with two diplexers, where the second diplexer (element 360, 361, 362 or 363 in Figure 3) is downstream from the first diplexer (element 204 in Figure 3). Williams also discloses that an AC power can be taken from the lowest frequency bands of the coaxial cable (see Column 11, Lines 60-64). Also note the rejection of claim 3 and Figure 2 for the couplers being resident on the RF line. Williams fails to teach that the first diplexer separates and recombines a branch entering the tap into a power line and RF line.

Bushue discloses a tap that separates and recombines an RF and power signal at a first diplexer (see Column 2, Lines 40-52).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the first diplexer of Williams and Cooper, using the first diplexer of Bushue for the purpose of providing a device for obtaining both a RF communication signal and an electrical power signal from a coaxial distribution cable in a combined CATV and telecommunication network (see Column 2, Lines 22-26 of Bushue).

Referring to claim 25, see rejection of claim 22.

4. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (U.S. Patent No. 5,745,836) in view of Cooper et al. (U.S. Patent No. 6,772,437) in further view of Wagner (U.S. Patent No. 4,812,779).

Referring to claim 31, Williams and Cooper teach an amplifier (element 132 in Figure 1) and the upstream facing directional coupler is located on the upstream line (see rejection of claim 3), but does not teach the specifics of the amplifier. Wagner teaches an amplifier in a cable system (see element 10 in Figure 1), which contains a first diplexer (element 16 in Figure 1) connected to the input (element 12 in Figure 1). Wagner also teaches a forward amplifier connected to the first diplexer (see element 18 in Figure 1) and the at least one branch by a downstream line (see line extending from element 18 to coupler 20 in Figure 1).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the amplifier of Williams and Cooper, using the amplifier of Wagner, for the purpose of reducing interstage losses in a multistage trunk amplifier module (see Column 2, Lines 67-68 of Wagner).

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Salce whose telephone number is (703) 305-1824. The examiner can normally be reached on M-Th 8am-6pm (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason P Salce
Patent Examiner
Art Unit 2611

May 5, 2005

CHRIS GRANT
PRIMARY EXAMINER